

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site:	L3R	Date:	06/27/14
Applicant:	Enbridge	County:	Kittson
Investigators:	BCS/BEH	State:	MN
Soil Unit:	I248A	Subregion (MLRA or LRR):	MLRA 56
Landform:	Dip	NWI Classification:	
Slope (%):	0 - 2%	Local Relief:	CL
	Latitude: 48.68964872	Longitude: -97.092788333	Datum:
Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in remarks)			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> Soil <input type="checkbox"/> or Hydrology <input type="checkbox"/> naturally problematic?			

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	Yes	Hydic Soils Present? Yes	
Wetland Hydrology Present?	Yes	Is This Sampling Point Within A Wetland?	Yes

Remarks: **The wetland is a narrow-leaf cattail dominated shallow marsh located in a CRP field. The site connects to an adjacent CRP field across an unimproved farm road by a continuous depression which covers the entire width of the road. The wetland is also adjacent to a pre-existing pipeline corridor.**

HYDROLOGY

Wetland Hydrology Indicators (Check all that apply; Minimum of one primary or two secondary required):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B11 - Salt Crust <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots (not till) <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots (tilled) <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D2 - Geomorphic Position <input checked="" type="checkbox"/> D5 - FAC-Neutral Test <input type="checkbox"/> D7 - Frost-Heaved Hummocks (LRR F)
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Field Observations:

Surface Water Present? Yes <input checked="" type="checkbox"/>	Depth: <u>5</u> (in.)	Wetland Hydrology Present? <u>Y</u>
Water Table Present? Yes <input checked="" type="checkbox"/>	Depth: <u>0</u> (in.)	
Saturation Present? Yes <input checked="" type="checkbox"/>	Depth: <u>0</u> (in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Five inches of surface water are present at the sample point.**

SOILS

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.)
 (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Depth (In.)	Matrix			Mottles				Texture	Remarks
	Color (Moist)		%	Color (Moist)	%	Type	Location		
0-7	Hue <u>2.5Y</u>	<u>2.5/1</u>	<u>100</u>					<u>SIC</u>	
7-13	Hue <u>2.5Y</u>	<u>4/2</u>	<u>98</u>	Hue <u>10YR</u>	<u>4/6</u>	<u>2</u>	<u>C</u>	<u>M</u>	<u>C</u>
13-20	Hue <u>2.5Y</u>	<u>5/1</u>	<u>55</u>	Hue <u>10YR</u>	<u>4/6</u>	<u>5</u>	<u>C</u>	<u>M</u>	<u>C</u>
13-20	Hue <u>2.5Y</u>	<u>2.5/1</u>	<u>40</u>					<u>C</u>	Vertical streaking

NRCS Hydic Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers (LRR F) <input type="checkbox"/> A9 - 1 cm Muck (LRR FGH) <input checked="" type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Mucky Mineral <input type="checkbox"/> S2 - 2.5 cm Mucky Peat or Peat (LRR G, H) <input type="checkbox"/> S3 - 5 cm Mucky Peat or Peat (LRR F) <input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> F1 - Loamy Mucky Mineral <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> F16 - High Plains Depressions (MLRA 72, 73 of LRR H)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A9 - 1 cm Muck (LRR I, J) <input type="checkbox"/> A16 - Cost Prairie Redox (LRR F, G, H) <input type="checkbox"/> S7 - Dark Surface (LRR G) <input type="checkbox"/> F16 - High Plains Depressions (LRR H, outside MLRA 72, 73) <input type="checkbox"/> F18 - Reduced Vertic <input type="checkbox"/> TF2 - Red Parent Material <input checked="" type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer Type: _____	Depth: _____	Hydic Soil Present? <u>Y</u>
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Remarks: **The soil profile consists of a dark, silty clay epipedon underlain by a reduced clay with 2% prominent redox concentrations in the matrix.**

WETLAND DETERMINATION DATA FORM
Great Plains Region

Project/Site: **L3R** Sample Point: **w-160n50w10-d1**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft. radius)

1.	Species Name	% Cover	Dominant	Ind. Status
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Total Cover = 0

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	<u>79</u>	x 1 =	<u>79</u>
FACW spp.	<u>10</u>	x 2 =	<u>20</u>
FAC spp.	<u>0</u>	x 3 =	<u>0</u>
FACU spp.	<u>0</u>	x 4 =	<u>0</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>
Total		<u>89</u> (A)	<u>99</u> (B)

Prevalence Index = B/A = 1.112

Sapling/Shrub Stratum (Plot size: 15 ft. radius)

1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				

Hydrophytic Vegetation Indicators:

 Rapid Test for Hydrophytic Vegetation

 X Dominance Test is > 50%

 X Prevalence Index is ≤ 3.0 *

 Morphological Adaptations (Explain) *

 Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Total Cover = 0

Herb Stratum (Plot size: 5 ft. radius)

1.	<i>Typha angustifolia</i>	50	Y	OBL
2.	<i>Eleocharis palustris</i>	25	Y	OBL
3.	<i>Symphotrichum lanceolatum</i>	10	N	FACW
4.	<i>Lycopus americanus</i>	2	N	OBL
5.	<i>Alisma triviale</i>	2	N	OBL
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Definitions of Vegetation Strata:

Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH, regardless of height.

Herb - All herbaceous (non-woody) plants, regardless of size.

Woody Vines - All woody vines, regardless of height.

Total Cover = 89

Woody Vine Stratum (Plot size: 30 ft. radius)

1.				
2.				
3.				
5.				
4.				

Hydrophytic Vegetation Present? Y

Remarks: **The wetland is dominated by narrow-leaf cattail, common spikerush, and white paniced aster.**

Additional Remarks: